CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCSICO BAY REGION

ORDER NO. 91 - 162

WATER RECLAMATION REQUIREMENTS FOR:

PACIFIC UNION COLLEGE
ANGWIN, NAPA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. Pacific Union College (hereinafter also called the Discharger) is a small academic institution located on Howell Mountain Road in the town of Angwin, in the hills east of the Napa Valley. The Discharger owns and operates a wastewater treatment plant serving the college and ancillary facilities.

2. The Board adopted Order No. 82-49 on September 15, 1982 prescribing Water Reclamation Requirements for the Discharger's wastewater treatment plant and use of the plant effluent as reclaimed water.

3. The Discharger submitted a Report of Waste Discharge, dated August 13, 1991, for updating and reissuance of Water Reclamation Requirements.

4. The Discharger's treatment plant has an average dry weather flow of about 140,000 gallons per day (gpd), and design treatment capacity of 200,000 gpd. The plant serves a total population of about 2,360 persons, which includes an enrollment of about 1,000 students during the academic year.

5. The facilities served by the plant include the following: 550 student rooms, 168 private residences, about 18 academic buildings, the college Dining Commons, one commercial laundry (hospital and hotel linens only), two self-service laundromats, and a small pizzeria and deli located in a small commercial complex.

6. The treatment plant consists of the following, in order of wastewater flow: a grit chamber, a flow meter, a comminuter, a bar screen, a primary clarifier, a trickling filter, a secondary clarifier, and five sequentially-operated oxidation ponds. The plant also includes an open-top sludge holding tank/digester, and four sand-filter sludge drying beds.

7. Effluent from the secondary clarifier is discharged to the first oxidation pond. The wastewater then flows sequentially through the other four ponds, by gravity overflow through pipes in the pond levees. Ponds 1 and 3 are equipped with one mechanical aerator each. The physical characteristics of the ponds are tabulated below:

Pond	Depth	Surface Area		Volume	
	(ft.)	(sq.ft.)	(ac.)	(ac.ft.)	(million gallons)
1	6	30,625	0.70	4.22	1.374
2	6	33,075	0.76	4.56	1.484
3	6	13,125	0.30	2.84	0.926
4	7	34,800	0.80	5.59	1.822
5	8	18,850	0.43	3.46	1.128
Total	--	130,475	2.99	20.67	6.734

8. Effluent from the fifth oxidation pond is pumped to an effluent storage reservoir located uphill and about one mile from the treatment plant. The storage reservoir has a surface area of about 14.2 acres, and storage capacity of about 51 million gallons (156 acre-feet).

9. During the dry weather season treated effluent is reclaimed and used for irrigation of up to 112 acres of agricultural fields for fodder crop production. Reclaimed water for irrigation is either pumped from the storage reservoir, or pumped directly from the fifth oxidation pond. A map showing the locations and acreages of the reclaimed water irrigation areas is included as Attachment A of this Order.

10. The Discharger is both Producer and User of the reclaimed water.

11. During the wet weather season, all wastewater plant effluent is stored, both in the oxidation ponds and in the storage reservoir.

12. Sludge solids generated by the wastewater treatment process are collected in the primary clarifier, and routinely pumped from the primary clarifier sump into the open-top sludge holding tank/digestor. Periodically, sludge is pumped from the digester tank to one of four adjacent, sand-filter sludge drying beds. During the dry weather season, dried sludge is removed from the drying beds and spread and disced into soil as a soil amendment on up to 31 acres of agricultural land owned by the Discharger. A map showing the locations and acreages of the sludge disposal areas is included as Attachment A of this Order.

13. Conn Creek, a tributary of the Napa River, runs through the Discharger's property. The wastewater treatment plant and one of the irrigation fields are located adjacent to Conn Creek.

14. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan identifies water quality objectives and beneficial uses for Conn Creek, and ground water in the Napa Valley area.

15. The beneficial uses identified in the Basin Plan for Conn Creek include:

    a. Municipal and Domestic Supply
    b. Fresh Water Replenishment (of surface and ground waters)
    c. Water Contact Recreation
    d. Non-contact Water Recreation
    e. Cold Fresh Water Habitat
    f. Wildlife Habitat
    g. Fish Migration and Spawning

16. The beneficial uses identified in the Basin Plan for ground water in the Napa Valley area include:

    a. Municipal Supply
    b. Industrial Process Water Supply
    c. Industrial Service Supply
    d. Agricultural Supply.

17. Section 13523 of the California Water Code provides that a Regional Board, after consultation with and reception of recommendations from the State Department of Health Services, and if it is determined such action to be necessary to protect the public health, safety or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water.

18. These water reclamation requirements are in conformance with the statewide water reclamation criteria established by the State Department of Health Services, as prescribed in Title 22, Section 60301 through Section 60355, California Code of Regulations.

19. This project involves the operation of existing privately-owned sewage treatment and disposal facilities with negligible expansion of use beyond that previously existing, and as such is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, Califorina Code of Regulations, Chapter 3, Section 15301.

20. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe water reclamation requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit written views and recommendations.

21. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, Pacific Union College, pursuant to the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. The average dry weather flow for the wastewater treatment plant shall not exceed 200,000 gallons per day. The average dry weather flow shall be determined over three consecutive dry weather months each year.

2. The collection, treatment, storage, distribution or reuse of wastewater shall not create a pollution or nuisance as defined in Sections 13050 (l) and (m), respectively, of the California Water Code.

3. There shall be no bypass or overflow of untreated or partially wastewater or reclaimed water to waters of the State from the Discharger's wastewater collection, treatment, storage, distribution or disposal facilities.

4. The use of reclaimed water, or storage or land-spreading of sludge shall not degrade the quality of any groundwater suitable for domestic use, or cause an increase in any quality parameter that would make groundwater unsuitable for irrigation use.

B. Water Quality Specifications

Reclaimed Water

1. Reclaimed water used for irrigation of fodder crops shall meet the following quality limits at all times, in any grab sample:

a. 5-day Biochemical Oxygen Demand	40.0 mg/l, maximum.
b. Settleable Solids	0.5 milliter/liter-hour, maximum
c. Dissolved Oxygen	2.0 mg/l, minimum.
d. Dissolved Sulfides	0.1 mg/l, maximum.

2. The Discharger shall discontinue the use of reclaimed water during any period when there is reason to believe that the limits specified in B.1. above are not being met. The use of reclaimed water shall not be resumed until all conditions which caused the limits specified in B.1. to be violated have been corrected.

B. Water Quality Specifications (continued)

Oxidation Pond and Storage Reservoir Water

3. Water in the oxidation ponds and in the storage reservoir shall meet the following quality limits at all times, within one foot of the water surface, in any grab sample:

a. Dissolved Oxygen	2.0 mg/l, minimum
b. Dissolved Sulfide	0.1 mg/l, maximum
c. pH	6.0, minimum; 9.0, maximum.

4. To prevent the threat of overflows, a minimum freeboard of two (2) feet shall be maintained in the oxidation ponds and in the storage reservoir at all times.

5. All ponds shall be adequately protected from erosion, washout, and flooding from a rainfall event having a predicted frequency of once in 100 years.

C. Reclaimed Water Use Specifications

1. Use of reclaimed water shall be limited to the areas shown as "Wastewater Irrigation Areas" in Attachment A of this Order, unless prior written approval is obtained from the Board's Executive Officer.

2. Irrigation with reclaimed water shall be limited to the period of April 1 through October 30, unless prior written approval is obtained from the Board's Executive Officer.

3. Irrigation with reclaimed water shall be conducted in a manner which will prevent public contact with the reclaimed water, including airborne spray.

4. Reclaimed water shall not be allowed to escape from the irriation areas, either by surface flow or airborne spray.

5. A setback of at least sixty (60) feet, from the top of the streambank of Conn Creek to any reclaimed water irrigation area perimeter, shall be maintained at all times.

6. Reclaimed water shall not be applied to the irrigation areas: (a) during rainfall, or (b) when rainfall is expected to occur within 24 hours, or (c) when soils are saturated such that ponding or runoff is likely to occur.

7. Reclaimed water irrigation areas shall be clearly identified with warning signs to inform the public of the use of reclaimed wastewater which is not safe for drinking or contact. Warning signs shall be conspicuous and clearly readable. Signs shall be posted at adequate intervals around each publicly-accessible irrigation area.

C. Reclaimed Water Use Specifications (continued)

8. Irrigation with reclaimed water shall be managed so as to prevent odors or nuisance conditions, to prevent runoff, and to prevent ponding or saturated grounds which could provide breeding conditions for mosquitos or other vectors of public health significance.

9. Reclaimed water shall not be used as a domestic or livestock animal water supply.

10. There shall be no irrigation or impoundment of reclaimed water within 100 feet of any well used for domestic or irrigation water supply.

D. Reclaimed Water System Specifications

1. All equipment, including pumps, piping, valves, storage ponds etc., which may at any time contain wastewater or reclaimed water, shall be adequately and clearly identified with warning signs to inform the public that the liquid contained is wastewater which is unfit for drinking or contact.

2. All drinking water facilities and domestic supply wellheads within 500 feet of any reclaimed water use area shall be protected from direct or windblown reclaimed water spray.

3. There shall be no cross-connection between potable water supply and piping containing reclaimed water.

4. An air-gap separation must be provided between any reclaimed water system (storage or distribution) and any domestic or well water system used as supplemental irrigation sources.

5. All domestic water service connections to reclaimed water use areas shall be equipped with an air-gap separation device.

6. There should be at least a 10 foot horizontal and a one foot vertical separation between all pipelines transporting reclaimed water and pipelines transporting domestic water, with the domestic water pipes above the reclaimed water pipes.

E. Wastewater Treatment Specifications

1. The wastewater treatment plant shall be operated and supervised by personnel adequately trained in the operations and maintenance of the facilities, preferably certified Wastewater Treatment Plant Operators, to ensure consistent compliance with the requirements of this Order.

2. The wastewater treatment facilities shall be adequately equipped with alarm devices to provide sufficient warning of high water levels, in order to prevent overflows.

F. Sludge Handling and Disposal Specifications

1. The application of sewage sludge to land shall be limited to the areas shown as Sludge Disposal Areas on Attachment A of this Order, unless prior written approval is obtained from the Board's Executive Officer.

2. The application of sewage sludge to land shall be limited to the period of April 1 through October 30, unless written approval is obtained from the Board's Executive Officer.

3. The rate of application of sewage sludge to land shall not exceed thirty tons dry weight per acre per year.

4. The sludge shall be spread thinly on the land, and disced into the soil as soon as possible thereafter, to a depth of no more than three feet from the ground surface.

5. Sludge shall not be applied to land: (a) during rainfall, or (b) when rainfall is expected to occur within 24 hours, or (c) when soils are saturated.

6. Sludge shall not be applied to land within one hundred feet of any stream or drainage ditch.

7. No animals shall be allowed to graze within the sludge application areas.

8. No root crops grown in the sludge diposal areas shall be used for human consumption.

9. The sludge storage area (drying beds) shall be maintained so as to contain all stormwater which comes into contact with the stored sludge either within the drying bed area, or within the wastewater treatment process.

10. A minimum of one foot of freeboard shall be maintained in the sludge drying beds at all times.

11. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of at a legal point of disposal, and in accordance with the provisions of Chapter 15 of Title 23 of the California Code of Regulations. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been prescribed or waived by a Regional Water Quality Control Board and which is in full compliance therewith.

12. The application to land of undried, liquid sewage sludge will only be allowed in accordance with a Sludge Disposal Management Plan which has been approved by the Board's Executive Officer. The Plan shall identify the quantity and quality of sludge to be disposed; methods of application and soil incorporation; disposal site location, soil and groundwater characteristics; and a monitoring program.

G. Provisions

1. The Discharger shall comply with all sections of this Order immediately upon adoption.

2. The Discharger shall comply with the Self-Monitoring Program for this Order, as adopted by the Board and as may be amended by the Executive Officer.

3. The Discharger shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed or as modified to achieve compliance with this Order.

4. The Discharger shall develop and maintain an Operations and Maintenance manual for the Wastewater Treatment Plant. The purpose of this manual is to provide plant operators and regulatory personnel with a source of information describing the plant equipment, recommended operating strategies, process control monitoring, and maintenance activities, necessary to maintain the plants in good working condition and to comply with the requirements of this Order.

5. In the event the Discharger is unable to comply with any of the conditions of this Order due to:
   a. Breakdown of wastewater transport or treatment equipment;
   b. Accidents caused by human error or negligence; or
   c. Other causes such as acts of nature,
   the Discharger shall notify the Board in accordance with the reporting procedures specified in the Self-Monitoring Program for this Order.

6. The Discharger shall permit the Board or its authorized representatives, in accordance with Section 13267(c) of the California Water Code:

   a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;

   b. Access to and copy of, at reasonable times, any records that must be kept under the conditions of this Order;

   c. Inspection, at reasonable times, of any facility (including monitoring and control equipment), practices, or operations regulated or required under this Order; or

   d. To photograph, sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order.

7. In the event of any change in control or ownership of land or waste discharge facilities regulated by this Order, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board.

G. Provisions (continued)

8. The Discharger shall notify the Board, in writing, at least 60 days before making any material change in the character, location, or volume of the wastewater treatment or disposal practices regulated by this Order, except for emergencies, in which case the Board shall be notified as soon as possible.

9. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:

   a. Violation of any term or condition contained in this Order;

   b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized reuse; or

   d. Endangerment to public health or environment that can only be regulated to acceptable levels by Order modification or termination.

10. The Board will review this Order periodically and may revise the requirements as necessary to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in this Regional Board's Basin Plan; or changes in the discharge characteristics.

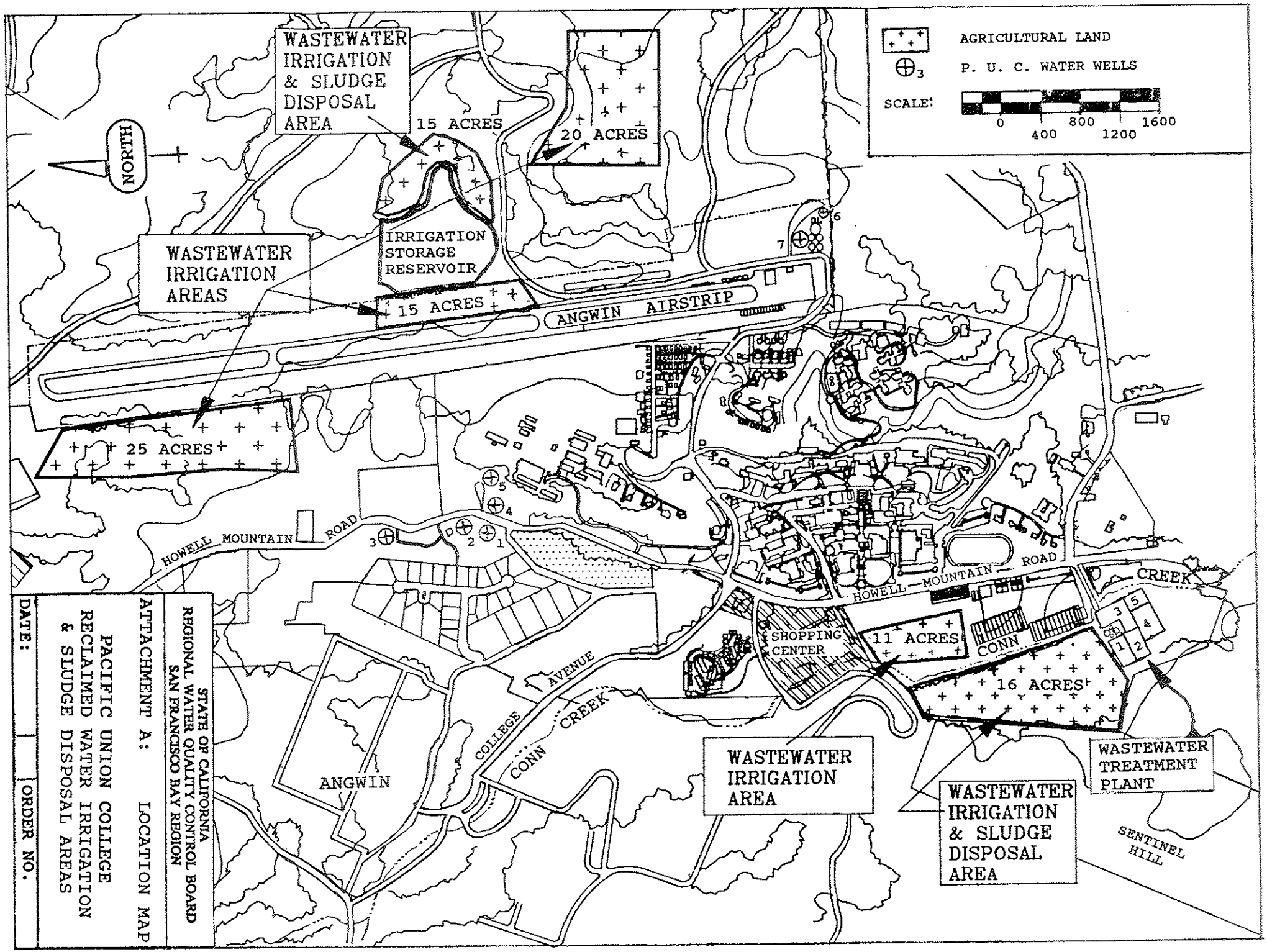
11. The water reclamation requirements prescribed by this Order supercede those prescribed by this Board's Order No. 82-49. Order No. 82-49 is hereby rescinded.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on November 20, 1991.

STEVEN R. RITCHIE
Executive Officer

Attachments:
A. Location Map - Reclaimed Water Irrigation & Sludge Disposal Areas
Self-Monitoring Program

[File No. 2139.3012]
[Originator/BDA]
[Reviewer/RJC]


AGRICULTURAL LAND
P. U. C. WATER WELLS
SCALE:
0
400
800
1200
1600
NORTH
WASTEWATER IRRIGATION & SLUDGE DISPOSAL AREA
15 ACRES
20 ACRES
IRRIGATION STORAGE RESERVOIR
WASTEWATER IRRIGATION AREAS
15 ACRES
ANGWIN AIRSTRIP
25 ACRES
HOWELL MOUNTAIN ROAD
HOWELL MOUNTAIN ROAD
CREEK
SHOPPING CENTER
11 ACRES
CONN
16 ACRES
AVENUE
COLLEGE
CONN CREEK
ANGWIN
WASTEWATER IRRIGATION AREA
WASTEWATER IRRIGATION & SLUDGE DISPOSAL AREA
WASTEWATER TREATMENT PLANT
SENTINEL HILL
STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION
ATTACHMENT A: LOCATION MAP
PACIFIC UNION COLLEGE
RECLAIMED WATER IRRIGATION
& SLUDGE DISPOSAL AREAS
DATE:
ORDER NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

__ PACIFIC UNION COLLEGE, __

__ ANGWIN, NAPA COUNTY _____

(For Water Reclamation Requirements, Order No. 91 - 162)

CONTENTS:

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principle purposes of a monitoring program by a waste discharger or reclaimed water user, also referred to as a self-monitoring program, are:

1. To document compliance with waste discharge or water reclamation requirements established by this Regional Board; and

2. To facilitate self-policing by the discharger and/or reclaimed water user in the prevention and abatement of pollution arising from waste discharge or reclaimed water use.

II. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR S136), the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association and Water Pollution Control Federation, or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS), or a laboratory waived by the Executive Officer from obtaining a DOHS certification for these analyses.

The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervize all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

III. DEFINITION OF TERMS

A. A grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only conditions existant at the time of sampling.

B. A flow sample is the accurate measurement of the flow volume over a given period of time using a properly calibrated and maintained flow measuring device. Flows calculated from properly maintained pump useage records for an accurately calibrated pump are acceptable.

C. Freeboard is defined as the vertical distance between the water surface and the top of the water impoundment containment (perimeter dike, berm or outlet structure).

D. Standard Observations

1. Pond and Storage Reservoir Areas

(a) Evidence of seepage or overflow (Show affected area on sketch, and include estimated volume or flow rate).

(b) Nuisance Odors: If present, indicate apparent source or cause, characterization, direction of travel, and area affected by the odors.

(c) Warning signs properly posted to inform public that wastewater contained therein is not safe for drinking or contact.

2. Irrigation Area (Reclaimed Water Use Area)

(a) Evidence of reclaimed water escaping the irrigation area through surface runoff or airborne spray (Show affected area on a sketch).

(b) Nuisance Odor from irrigation area: If present, indicate apparent source or cause, characterization, direction of travel, and area affected by the odors.

(c) Evidence of ponding of reclaimed water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water.

(d) Warning signs properly posted to inform public that water used for irrigation is reclaimed water which is not safe for drinking or contact.

IV. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

NOTE: A map or sketch of the facility site showing the locations of all stations described below shall accompany the first monitoring report following adoption of this Self-Monitoring Program, and subsequent reports when station locations are changed or a violation is reported.

Station	Description
A. TREATMENT PLANT INFLUENT	
INF	At a point in the influent to the treatment plant suitable for measuring the flow of wastewater into the plant.
B. POND #1, POND #5, and STORAGE RESERVOIR WATER	
P-1, P-5, & SR	At points in Pond #1, Pond #5, and the Storage Reservoir, respectively, within one foot of the water surface and representative of the water contained therein.
C. POND #5 and STORAGE RESERVOIR EFFLUENT (RECLAIMED WATER TO BE USED FOR IRRIGATION)	
P-EFF, SR-EFF	At points in the effluent from Pond #5 and Storage Reservoir, respectively, prior to irrigation, suitable for monitoring the quality of water to be used for irrigation.
D. POND, RESERVOIR and IRRIGATION AREA PERIMETERS	
PP-1 through PP-5	**Pond Perimeter** - A point on the perimeter levee of each oxidation pond for measuring freeboard; and the adjacent area along the pond external levees, for standard observations.
SRP	**Storage Reservoir Perimeter** - A point on the storage reservoir levee, for freeboard measurement; and the adjacent area for standard observations.
I-1 through I-'n'	**Irrigation Area** - Points along the perimeter of each irrigation area, typically about 1000 feet apart, for standard observations.
E. SLUDGE DISPOSAL AREAS	
SDA	Areas where sludge is disposed of by application to land.

V. REPORTS TO BE FILED WITH THE REGIONAL BOARD

A. Self-Monitoring Reports

Written reports shall be filed for each calendar month. The reports shall be submitted to this Regional Board's office by the fifteenth day of the month following the monitoring period. The reports shall consist of the following:

1. Letter of Transmittal

A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

2. Results of Analyses and Observations

a. Tabulations of the results from each required analysis and/or observations specified in Table 1 (Attachment A) by sampling or observation date, type of sample, and sample station.

b. Copies of laboratory analysis result reports for any sample analyses conducted by a contract laboratory.

B. Report of Permit Violation

In the event the Discharger violates, or threatens to violate the conditions of the water reclamation requirements and prohibitions due to:

a. Maintenance work, power failure, or breakdown of wastewater transport or treatment equipment;

b. Accidents caused by human error or negligence; or

c. Other causes such as acts of nature,

the Discharger shall notify the Regional Board office by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. Written confirmation of this notification shall be submitted within two weeks of the date of the incident. The written notification shall

include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

VI. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSES

The Discharger is required to perform observations, sampling, measurements and analyses according to the schedule given in Table 1 and Table 1 Footnotes (Attachment A).

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in **Regional Board Order No. 91 - 162.**

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger and revisions will be ordered by the Executive Officer.

STEVEN R. RITCHIE
Executive Officer

Effective Date 11/6/91

Attachments:

A. Table 1 - Schedule for Sampling, Measurements and Analyses

[File No. 2139.3012]
[Originator/ BDA]
[Reviewer/ RJC]

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS AND ANALYSES (1)

SAMPLING STATIONS -->	Foot note	INF	P-1, P-5, & SR	P-EFF & SR-EFF	All PP	SRP	All I	SDA
Type of Sample -->		Flow	G	Flow G	O	O	O	O
Parameter (units)								
Flow Rate (gpd)	(2)	D						
Flow Volume (gallons)	(2)	M		M				
BOD, 5-day (mg/l)	(3)			M				
Settleable Solids (ml/l-hr)	(3)			M				
Dissolved Oxygen (mg/l)			M					
Dissolved Sulfide (mg/l)	(4)		M					
pH (units)			M					
Freeboard (feet)					W	W		
All Applicable Standard Observations	(5)				W	W	W	
Sludge Disposal Info.	(6)							M

LEGEND:

Type of Sample
Flow = Flow measurement
G = Grab Sample
O = Observations

Sampling Frequency
D = Daily
W = Weekly
M = Monthly

SELF-MONITORING PROGRAM - PACIFIC UNION COLLEGE (Order No. 91-162)

ATTACHMENT A

TABLE 1 FOOTNOTES

(1) This Self-Monitoring Program is applicable year-round. However: Indicated monitoring for P-EFF, SR-EFF, and all I stations is only required during months when irrigation with reclaimed water occurs.

(2) Flow Rate & Flow Volume:
Wastewater Treatment Plant Influent (INF):
Continuous flow measurement, with Daily flowmeter reading. Report Average Daily and Monthly Total Flow for eachmonth.

Pond #5 and Storage Reservoir Effluent (P-EFF & SR-EFF):
For each station, measure and report the Total Monthly Flow distributed to irrigation.

(3) BOD & Settleable Solids:
Separate sampling and analysis for Pond #5 effluent (P-EFF), and Storage Reservoir effluent (SR-EFF), for both BOD and Settleable Solids, are required on a monthly basis, during any month when effluent is distributed to irrigation fields from these respective sources.

(4) Dissolved Sulfides: Analysis required only when Dissolved Oxygen is less than 2.0 mg/l.

(5) Observations of Irrigation Area (All I stations):
Observations should be conducted during irrigation whenever possible, or as soon as possible thereafter.

(6) Sludge Disposal Information:

Monthly, during any month when sewage sludge is disposed by application to land, report the following:

a. Date(s) when sludge was applied to land;
b. Location and amount of area (acres) where sludge was applied;
c. Total quantity of sludge applied (cubic yards, or total dry weight);
d. Date(s) when sludge was disced into the soil.